WOSC10

PREVIEW QUESTION BANK

Module Name : Computers and Information and Communication Technology-E

Exam Date : 25-Mar-2018   Batch : 11:00-13:00

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
		Objective Question		
1	1	Fedaration Cup, World Cup, Allwyn International Trophy and Challenge Cup are awarded to winners of A1: Tennis **A2: Volleyball – (Correct Alternative)** A3: Basketball A4: Cricket	1.0	0.25
		Objective Question		
2	2	Which is the first country in the world to use drones for national mail service? A1: Russia	1.0	0.25

A2: **France – (Correct Alternative)**

A3: Sweden

A4: China

Objective Question				

3	3	Consider the following materials/objects:
		
		    A. Cornea
		    B. Diamond
		    C. Silicon
		    D. Sodium Chloride
		
		The above materials/objects when arranged in increasing order of refractive index would be as follows:
		
		A1: ADCB
		
		A2: **ADBC – (Correct Alternative)**
		
		A3: DABC
		
		A4: DACB
			1.0	0.25

Objective Question				
4	4	Various developed countries often claim that cattles in less developed countries are responsible for huge release of green house gases, thus causing green house effect. The developed countries often use this logic that these countries have lot of low yield cattle and if high yield cattle are adopted on a large basis, then release of significant amount of greenhouse gases can be checked from releasing in the atmosphere. Cattles release the greenhouse gases due to:	1.0	0.25

A1 Methanogenic bacteria in the stomach – (Correct : Alternative)

A2 : Improper handling of cow waste (eg: cow-dung, urine,etc.)

A3 : Improper handling of leftover fodder

A4 : High use of chemical fertilizers in agriculture

Objective Question

5	5	Consider the following statements and select the wrong option	1.0	0.25

A1 : If a person is stung by a honeybee it causes pain and irritation. In such case, if baking soda is applied to the area, it provides relief to the person.

A2 : Vitamin E is helpful in relief from sunburns

A3 : On various sunscreen creams/lotions SPF is mentioned. SPF stands for Sun Protection Factor. SPF 20 means that the lotion is protecting you from 20% of the harmful UV radiations in the sunlight. – (Correct Alternative)

A4 : Vitamin D is required for the absorption of calcium by human beings

Objective Question

6	6		1.0	0.25

Following are some observed natural phenomena :

A. Mirage seen in places like deserts

B. In winter sound of a whistle of a railway engine is heard at much longer distances

C. Twinkling of a star in night as seen by naked eye

D. Visibility of sun for some time after the sunset

Which of the above natural phenomena are related to the variation in density of atmospheric air?

A1: ABD

A2: BCD

A3: ABCD – (Correct Alternative)

A4: None of these

Objective Question				
7	7	The following are some common diseases: A. Diphtheria B. Rabies C. Cholera D. Malaria Which of the above diseases are not caused by Virus? A1: ABC A2 BCD	1.0	0.25

:

A3 **ADC – (Correct Alternative)**
:

A4 ABD
:

		Objective Question		
8	8	Which of the following is Greenhouse gas?	1.0	0.25

A1 Carbon Monoxide
:

A2 **Carbon Dioxide – (Correct Alternative)**
:

A3 Sulphur Dioxide
:

A4 Chlorine
:

		Objective Question		
9	9	Tuberculosis is caused due to	1.0	0.25

A1 **Bacteria – (Correct Alternative)**
:

A2 Virus
:

A3 Fungus
:

A4 None of the above
:

Objective Question				
10	10	United Nations Headquarter is situated at	1.0	0.25
		A1 : Geneva		
		A2 : Washington D.C.		
		A3 : New York – (Correct Alternative)		
		A4 : Paris		

Objective Question				
11	11	A seller gives a discount of 25% on a product with MRP marked INR 3680. He earns a profit of 15% over its cost price in this transaction. Cost price of the product is	1.0	0.25
		A1 : 2100		
		A2 : 2200		
		A3 : 2300		
		A4 : 2400 – (Correct Alternative)		

Objective Question				
12	12	The side of a rectangular field is in ratio 4:5. Area of the field is 12500 sq mt. If the cost of fencing is INR 5/meter, how much it will cost to fence entire field?	1.0	0.25
		A1 : INR 61,000		

A2: **INR 62,500 – (Correct Alternative)**

A3: INR 63,500

A4: INR 65,000

Objective Question

13	13	A box has 3 red, 2 yellow and 5 green balls. If two balls are drawn at random, what is the probability that both are yellow balls?	1.0	0.25

A1: **1⁄45 – (Correct Alternative)**

A2: 5⁄18

A3: 3⁄31

A4: 2⁄9

Objective Question

14	14	If X and Y together can do a piece of work in 6 days. X alone can do the same work in 15 days. What time will Y take to do the same work alone?	1.0	0.25

A1: 8 days

A2: 9 days

		A3: **10 days – (Correct Alternative)**		
		A4: 12 days		

Objective Question

15	15	If a solid sphere of radius 15 cm is molded into 27 spherical smaller solid balls of equal radius, then the surface area of each smaller ball is	1.0	0.25
		A1: **100Ωcm^2 – (Correct Alternative)**		
		A2: 105Ωcm^2		
		A3: 110 Ωcm^2		
		A4: 115Ωcm^2		

Objective Question

16	16	Three six-sided dice are rolled simultaneously, what is the probability of getting a different number on each dice?	1.0	0.25
		A1: 1⁄3		
		A2: 2⁄3		
		A3: 4⁄9		
		A4: **5⁄9 – (Correct Alternative)**		

Objective Question

| 17 | 17 | The speed of a boat is 20 km/hr in still water. If the river is running at 5 km/hr, it takes boat 96 minutes to go to a place and come back to initial position. How far is the place from the initial point? | 1.0 | 0.25 |

A1: 12 km

A2: 13 km

A3: 15 km – (Correct Alternative)

A4: 18 km

Objective Question

| 18 | 18 | What is the probability of drawing an Ace or a King from a deck of 52 cards? | 1.0 | 0.25 |

A1: 1/13

A2: 2/13 – (Correct Alternative)

A3: 1/52

A4: 1/26

Objective Question

| 19 | 19 | A cricketer has an average of 55 runs in 5 innings. Find out how many runs she needed to score in her sixth innings to raise her average to 60 runs? | 1.0 | 0.25 |

A1: 60

A2: 75

A3: 80

A4: 85 – (Correct Alternative)

Objective Question		
20	20	The LCM of two numbers is 900 and their HCF is 50. If one of the numbers is 450, the other is

A1: 120

A2: 100 – (Correct Alternative)

A3: 125

A4: 150

Objective Question		
21	21	If you write an original software, what type of IP rights you can get to make and sell copies of your work?

A1: Copyright – (Correct Alternative)

A2: Patents

		A3:	Registered Designs		
		A4:	Trademarks		

Objective Question

22	22	International organization with objective to encourage creative activity and to promote intellectual property throughout world is	1.0	0.25
		A1: WIPO – (Correct Alternative)		
		A2: World Bank		
		A3: WTO		
		A4: UNDP		

Objective Question

23	23	_____ is a form of intellectual property that protects the expression of ideas	1.0	0.25
		A1: Trade name		
		A2: Copyright – (Correct Alternative)		
		A3: Patent		
		A4: Trade Mark		

	Objective Question		
24	24	A formula, process, device or other business information that has commercial value and is kept confidential to maintain an advantage over competitors is known as a:	1.0	0.25

A1 : Patent

A2 : Trade secret – (Correct Alternative)

A3 : Copyright

A4 : Trade Mark

	Objective Question		
25	25	Fair use allows you to use a limited amount of copyrighted material for your educational use. Which step below does NOT pass the fair use test?	1.0	0.25

A1 : Will be used for a non-profit educational purpose

A2 : Will be used on a Web page – (Correct Alternative)

A3 : Will only use a small portion

A4 : Will not deprive the author from making money

	Objective Question		
26	26	Term of patent in India is	1.0	0.25

A1 : 15 years

		A2 :	25 years	
		A3 :	**20 years – (Correct Alternative)**	
		A4 :	10 years	

Objective Question

27	27	What does a trademark protect?	1.0	0.25
		A1 : An invention		
		A2 : a work of art		
		A3 : **logos, names and brands – (Correct Alternative)**		
		A4 : the look, shape and feel of a product		

Objective Question

28	28	If a company develops a new technology that improves its main product, what type of intellectual property can they use to stop others from copying their invention ?	1.0	0.25
		A1 : Copyright		
		A2 : Geographical indications		
		A3 : **Patents – (Correct Alternative)**		

		A4: Trademarks		

29	29	A patent awarded by the patent office in Japan is valid in:	1.0	0.25
		A1: Indonesia		
		A2: Japan – (Correct Alternative)		
		A3: All ASEAN countries		
		A4: All countries that adhere to TRIPS		

30	30	Which of the following is NOT a basic requirement for a patent?	1.0	0.25
		A1: It must have utility		
		A2: It must be novel		
		A3: It must not be obvious to a person of ordinary skill in the field		
		A4: It must be extraordinary creative – (Correct Alternative)		

31	31	Choose the word or phrase that is most nearly opposite in meaning to the word in capital letter . LICENSED:	1.0	0.25

A1:	Unnoticed
A2:	unwritten
A3:	**not formally authorised – (Correct Alternative)**
A4:	not properly trained

Objective Question

32	32	Clear the jumble and select a grammatically correct sentence which also makes sense. To/ pay/ fifty/ rupees/ much/ too/ was/ me/ for/ thousand/ just	1.0	0.25

A1: Fifty thousand rupees was just too much for me to pay – (Correct Alternative)

A2: Pay just fifty thousand rupees to me was too much

A3: Fifty thousand rupees was too much just to pay for me

A4: To pay just fifty thousand rupees was too much for me

Objective Question

33	33	Select the word or set of words that best completes the following sentence. Because our supply of fossil fuel has been sadly ___, we must find ___ source of energy.	1.0	0.25

A1: stored…..hoarded

A2: compensated……significant

A3 : exhausted....inefficient

A4 : depleted.....alternate – (Correct Alternative)

Objective Question

| 34 | 34 | Tick the word <u>closest</u> in meaning to the word in *italics* - an *audacious* attempt | 1.0 | 0.25 |

A1 : useless

A2 : foolish

A3 : bold – (Correct Alternative)

A4 : crazy

Objective Question

| 35 | 35 | Choose the most appropriate word to complete the following sentence: There is a _____ of cows in the next field. | 1.0 | 0.25 |

A1 : Flock

A2 : Swarm

A3 : Group

A4 Herd – (Correct Alternative)

		:		

Objective Question

36	36	Choose the phrase which fits the sentence best : The bus _____ coming. A1 : Will A2 : Has **A3 : Is – (Correct Alternative)** A4 : On	1.0	0.25

Objective Question

37	37	Choose the correctly spelt word: **A1 : adversity – (Correct Alternative)** A2 : adeversity A3 : advercity A4 : aedversity	1.0	0.25

Objective Question

38	38	Which of the following words best explains the phrase given below? One who abandons his religious faith.	1.0	0.25

		A1:	traitor
		A2: apostate – (Correct Alternative)	
		A3:	prostrate
		A4:	blasphemer

Objective Question

39	39	Select the word that is most appropriate to complete the sentence: He was blind _____ one eye.	1.0	0.25
		A1: with		
		A2: along		
		A3: in – (Correct Alternative)		
		A4: on		

Objective Question

40	40	Choose the word or phrase that is most nearly opposite in meaning to the given word. **Widely**	1.0	0.25
		A1: narrowly – (Correct Alternative)		
		A2: spaciously		

| | | A3 : | broadly | | | |
| | | A4 : | relatively | | | |

Objective Question

41	41	Which of the following are prime numbers?	1.0	0.25
		A1 : 1,3,5		
		A2 : 1,5,7		
		A3 : 2,3,5 – (Correct Alternative)		
		A4 : 1,7,9		

Objective Question

42	42	A watch which gains 5 seconds in 3 minutes was set right at 7 a.m. In the afternoon of the same day, when the watch indicated quarter past 4 o'clock, the true time is	1.0	0.25
		A1 : $59\frac{7}{11}$ min. past 3 p.m.		
		A2 : 4 P.M. – (Correct Alternative)		
		A3 : $58\frac{7}{11}$ min., past 3 p.m.		
		A4 : $2\frac{3}{11}$ min. past 4 p.m		

Objective Question

| 43 | 43 | In a shower, 5 cm of rain falls. The volume of water that falls on 1.5 hectares of ground is | 1.0 | 0.25 |

A1: 75 cu. m

A2: 750 cu. m – (Correct Alternative)

A3: 7500 cu. m

A4: 75000 cu. m

Objective Question

| 44 | 44 | The total time taken by a boatman to row his boat upstream and downstream distance of 56 km together is 12 hours. The difference between times taken by him to row his boat another upstream and downstream distance of 42 km is 3 hours. Find the speed of boat and stream. | 1.0 | 0.25 |

A1: 12.5 kmph, 1.5 kmph

A2: 11.5 kmph, 2.5 kmph

A3: 9.5 kmph, 4.5 kmph

A4: 10.5 kmph, 3.5 kmph – (Correct Alternative)

Objective Question

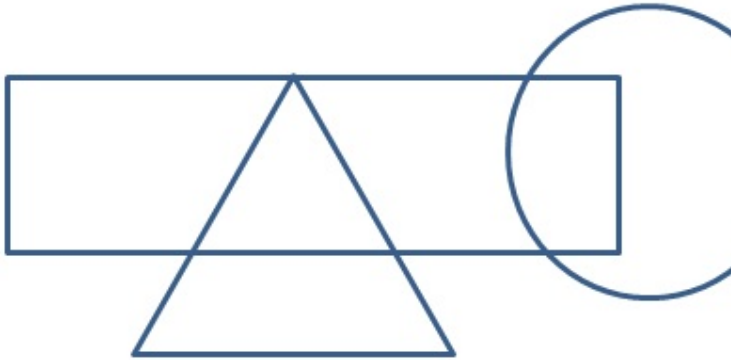| 45 | 45 | A says to B "I am twice as old as you were when I was as old as you are". The sum of their ages is 56 years. Find the difference of their ages. | 1.0 | 0.25 |

A1 : 9

A2 : 11

A3 : 13

A4 : 8 – (Correct Alternative)

46	46	A container contains 40 litres of milk. From this container 4 litres of milk was taken out and replaced by water. This process was repeated further two times. How much milk is now contained by the container?	1.0	0.25

A1 : 26.16

A2 : 28.16

A3 : 29.16 – (Correct Alternative)

A4 : 30.16

47	47	How many times is the HCF of 48, 36, 72, and 24 contained in their LCM?	1.0	0.25

A1 : 8 times

A2 16 times

:

A3 **12 times – (Correct Alternative)**
:

A4 4 times
:

Objective Question				
48	48	In how many different ways can the letters of the word 'OPTICAL' be arranged so that the vowels always come together?	1.0	0.25

A1 120
:

A2 **720 – (Correct Alternative)**
:

A3 4320
:

A4 1440
:

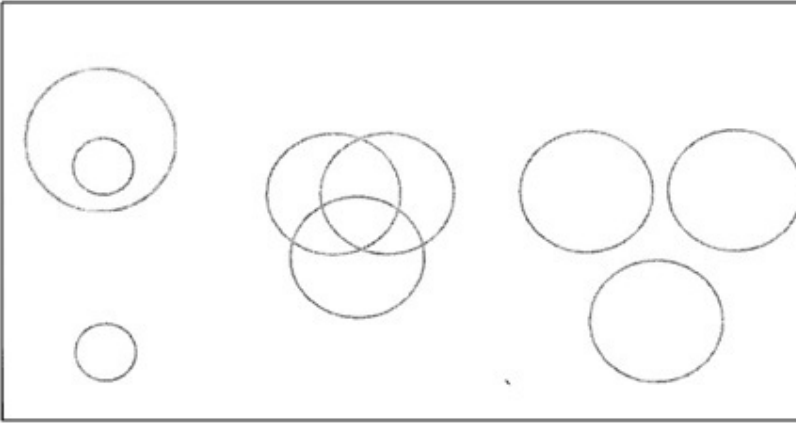| Objective Question				
49	49	Tea worth Rs. 126 per kg and Rs. 135 per kg are mixed with a third variety in the ratio 1:1:2. If the mixture is worth Rs. 153 per kg, the price of the third variety per kg will be:	1.0	0.25

A1 Rs. 169.50
:

A2 Rs. 170
:

A3 Rs. 180
:

| | | **A4:** **Rs. 175.50 – (Correct Alternative)** | | |

Objective Question

| 50 | 50 | In an exam, Class A scored an average of 50 marks with standard deviation of 5. Class B scored an average of 50 with standard deviation of 9. Which of the following statements is true?

A1: Class B has more students than Class A.

A2: Class A has more students than Class B

A3: Class A has more outlier students than Class B

A4: **Class B has more outlier students than Class A – (Correct Alternative)** | 1.0 | 0.25 |

Objective Question

| 51 | 51 | C is favorite child of F. C is fond of her younger brother B. B is not the only sibling of A. F loves her father M. What is A to M?

A1: **Grand child – (Correct Alternative)**

A2: Grand parent

A3: No relation

A4: Parent | 1.0 | 0.25 |

Objective Question

| 52 | 52 | If HEN = 124; WIRE = 9752; and RAT = 538, EATEN is | 1. | 0.2 |

_____?

05

A1: 28324

A2: 23874

A3: 23824 – (Correct Alternative)

A4: 42832

Objective Question

| 53 | 53 | A pen was marked as Rs 1000. After a good negotiation, I bought it at a discount of 20%. Now I am offering the same pen at 20% profit. What is the difference between the new price and old price? | 1.0 | 0.25 |

A1: Rs. 160

A2: Rs. 200

A3: Rs. 40 – (Correct Alternative)

A4: No difference

Objective Question

| 54 | 54 | In Roman numerals, M, L, and XL stand for _____. | 1.0 | 0.25 |

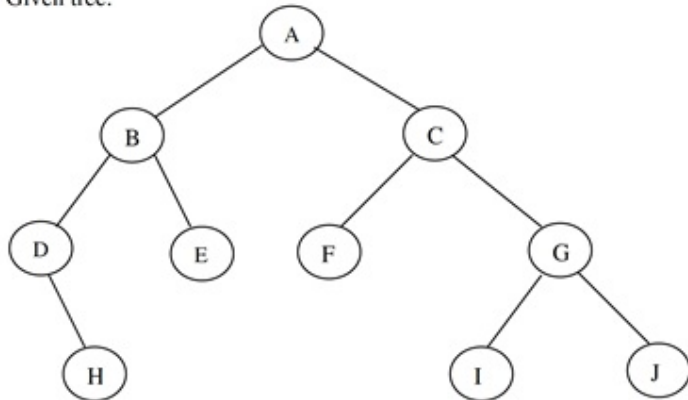**A1: 1000, 50, 40 – (Correct Alternative)**

A2 :	40, 42, 44
A3 :	30, 40, 50
A4 :	1000, 40, 50

Objective Question

| 55 | 55 | | 1. 0 | 0.25 |

In the following diagram, triangle represents mathematicians, rec[tangle represents] programmers and circle represents philosophers. Which of the follow[ing is] incorrect?

A1 :	Some of the philosophers are programmers.

A2 :	Some of the programmers are mathematicians.

**A3 Some of the mathematicians are philosophers. – (Correct
: Alternative)**

A4 :	Some of the programmers are not mathematicians

Objective Question

| 56 | 56 | | 1. | 0.2 |

Which of the diagrams best fits the association betwee[n]
Sparrow.

A

B

C

**A1
:** **A – (Correct Alternative)**

A2
: B

A3
: C

A4
: D

Objective Question			
57	57	A person walks at 10km⁄h for 6hr and at 8km⁄h for 12hr. Her average speed is _____ km⁄h	1.0 0.25

A1
: 6.22

A2 8.67 – (Correct Alternative)

:

A3 3.77
:

A4 9
:

Objective Question

| 58 | 58 | If K and M together own 1750 balls. If 4⁄25 of K's share is equal to 2⁄5 of M's share, how many balls M have? | 1.0 | 0.25 |

A1 1250
:

A2 500 – (Correct Alternative)
:

A3 750
:

A4 1050
:

Objective Question

| 59 | 59 | A large number of people suffer from Dengue every year in India. Dengue is spread by female mosquitoes during the day time. Dengue can be prevented by avoiding all chances of mosquitoes breeding. The para best supports the statement that | 1.0 | 0.25 |

A1 Male mosquitoes do not spread diseases
:

A2 People should not step out during the day time
:

A3 Mosquitoes breeding should be stopped – (Correct
:   Alternative)

		A4 : Dengue is the only diseases that affects Indian people		

Objective Question

| 60 | 60 | A player was asked to run around the circular cricket ground as punishment. The coach was standing at the exact center of the ground which was 100 M from the boundary. How much distance does the player cover in one round?

A1 : 200.8

A2 : 628.32 – (Correct Alternative)

A3 : 800.8

A4 : 400.4 | 1.10 | 0.25 |

Objective Question

| 61 | 61 | The post-order traversal of the following tree is

Given tree:

 | 1.10 | 0.25 |

		A1 :	DHBEAFCIGJ		
		A2 :	ABDHECFGIJ		
		A3 :	**HDEBFIJGCA – (Correct Alternative)**		
		A4 :	None		

Objective Question

62	62	What will be the output of the following program?
		
		``c
		void main()
		{
		    int const *p = 5;
		    printf("%d", ++(*p));
		}
		``
			1.0	0.25

		A1 : 5		
		A2 : 6		
		A3 : compiler error – (Correct Alternative)		
		A4 : runtime error		

Objective Question

63	63	What will be the output of the following program?
		
		``c
		main()
		{
		    int i = 5;
		    printf("%d%d%d%d%d",i++,i--,++i,--i,i);
		}
		``
			1.0	0.25

A1: **45545 – (Correct Alternative)**

A2: 55455

A3: 54454

A4: 45455

Objective Question

| 64 | 64 | What will be the output of the following program? | 1.0 | 0.25 |

```
main()
{
    int i=5,j=10;
    i=i&=j&&10;
    printf("(%d,%d)",i,j);
}
```

A1: (5,10)

A2: (0,0)

A3: (1,0)

A4: **(1,10) – (Correct Alternative)**

Objective Question

| 65 | 65 | Consider a logical address space of 8 pages of 1024 words, mapped into memory of 32 frames. Number of logical address bits are | 1.0 | 0.25 |

A1 : 5

A2 : 10

A3 : **13 – (Correct Alternative)**

A4 : 15

Objective Question

| 66 | 66 | Consider a system with 90% hit ratio, 40 nanosecs time to search the associative registers, 800 nanosecs time to access memory. Which of the following is the effective memory access time? | 1.0 | 0.25 |

A1 : 840

A2 : **920 – (Correct Alternative)**

A3 : 1640

A4 : 1560

Objective Question

| 67 | 67 | What is the average waiting time for shortest remaining time preemptive scheduling, when processes have the following characteristics? | 1.0 | 0.25 |

Process	Arrival time	Burst time
P1	0.0	7
P2	2.0	4
P3	4.0	1
P4	5.0	4

		A1: **3 – (Correct Alternative)**		
		A2: 4		
		A3: 5		
		A4: 6		

Objective Question

68	68	Key to represent relationship between tables is called	1.0	0.25
		A1: Primary key		
		A2: Secondary key		
		A3: **Foreign key – (Correct Alternative)**		
		A4: None of the above		

Objective Question

69	69	An entity set that does not have sufficient attributes to form a primary key is called	1.0	0.25
		A1: Strong entity set		
		A2: **Weak entity set – (Correct Alternative)**		

| | | | A3 : | Primary entity set | | |
| | | | A4 : | Simple entity set | | |

Objective Question

| 70 | 70 | Given a schema R(A, B, C, D, E), and the following set of FDs: {A→ E, E→ CD, BC → A, D → B}, which of the following is not a candidate key? | 1.0 | 0.25 |

A1 : A

A2 : BC

A3 : CD

A4 : D – (Correct Alternative)

Objective Question

| 71 | 71 | Which statements are true regarding ICMP packets? | 1.0 | 0.25 |

Which statements are true regarding ICMP packets?
i. They acknowledge receipt of a TCP segment.
ii. They guarantee datagram delivery.
iii. They can provide hosts with information about network problems.
iv. They are encapsulated within IP datagrams.

A1 : i. only

A2 : ii. and iii.

A3 : iii. and iv – (Correct Alternative)

| | | A4 : | iv. | | |

Objective Question

72	72	A Corporate router receives an IP packet with a source IP address of 192.168.214.20 and a destination address of 192.168.22.3. Looking at the following routing table, what will the router do with this packet?	1.0	0.25

```
Corp#sh ip route
[output cut]
R    192.168.215.0 [120/2] via 192.168.20.2, 00:00:23, Serial0/0
R    192.168.115.0 [120/1] via 192.168.20.2, 00:00:23, Serial0/0
R    192.168.30.0 [120/1] via 192.168.20.2, 00:00:23, Serial0/0
C    192.168.20.0 is directly connected, Serial0/0
C    192.168.214.0 is directly connected, FastEthernet0/0
```

A1 : discard it – (Correct Alternative)

A2 : route to S0/0

A3 : route to F0/0 interface

A4 : broadcast to find destination

Objective Question

73	73	For a 50 Mbps channel on a geo-stationary satellite with 540 msecs round trip delay, the bandwidth delay product is	1.0	0.25

A1 : 540 megabits

A2 : 50 megabits

A3 : 27 megabits – (Correct Alternative)

A4 :	10.8 megabits

Objective Question

74	74	Kruskal's algorithm for finding the minimum cost spanning tree in a graph is an example of a _____ algorithm	1.0	0.25
		A1 : Dynamic programming		
		A2 : Greedy – (Correct Alternative)		
		A3 : Branch and bound		
		A4 : Divide and Conquer		

Objective Question

75	75	The running time for mergesort algorithm is	1.0	0.25
		A1 : $O(n^2)$		
		A2 : $O(n)$		
		A3 : $O(n\log n)$ – (Correct Alternative)		
		A4 : $O(\log n)$		

Objective Question

76	76	What is the result on a stack S that contains only an element X after the following operations? pop(S);	1.0	0.25

top(S);

A1
:   S

A2
:   X

A3 Null
:   **– (Correct Alternative)**

A4
:   None of the above

Objective Question

77	77	A simple connected undirected graph on n nodes and n-1 edges can be i. tree ii. path iii. cycle	1.0	0.25

A1
: **i. and ii – (Correct Alternative)**

A2
: ii. and iii.

A3
: i. and iii.

A4
: i., ii., and iii.

Objective Question

78	78	In a tree, the number of nodes with degree 3 or more is	1.0	0.25

A1
: strictly bigger than number of leaves

A2 equal to the number of leaves

:

A3 strictly smaller than the number of leaves – (Correct
:   Alternative)

A4
:   smaller or equal to the number of leaves

Objective Question				
79	79	SQL allows duplicate tuples in relations, and correspondingly defines the multiplicity of tuples in the result of joins. Which of the following queries always give the same answer as the nested query shown if attribute B is a primary key in S: Select * from R where B in (Select S.B from S) i. Select R.* from R, S where R.B=S.B ii. Select distinct R.* from R, S where R.B=S.B iii. Select R.* from R, (Select distinct B from S) as S1 where R.B=S1.B A1 : (i) **A2 (i) and (iii) – (Correct Alternative)** **:** A3 : (ii) and (iii) A4 : None of the above	1. 0	0.2 5
Objective Question				
80	80	Consider a system having 'm' resources of the same type. These resources are shared by 3 processes A, B, C, which have peak time demands of 3, 4, 6 respectively. The minimum value of 'm' that ensures that deadlock will never occur is **A1 11 – (Correct Alternative)** **:**	1. 0	0.2 5

		A2 :	12		
		A3 :	13		
		A4 :	14		

Objective Question

| 81 | 81 | A semaphore is a shared integer variable | 1.0 | 0.25 |

A1 : that cannot drop below zero – (Correct Alternative)

A2 : that cannot be more than zero

A3 : that cannot drop below one

A4 : that cannot be more than one

Objective Question

| 82 | 82 | How many times the following C program prints yes : | 1.0 | 0.25 |

```
main()
{
fork();fork();printf("yes");
}
```

A1 : 2 times

A2 : 3 times

A3 4 times – (Correct Alternative)
:

A4 8 times
:

		Objective Question		
83	83	The Address Resolution Protocol (ARP) is used for :	1.0	0.25

A1 Finding the IP address from the DNS.
:

A2 Finding the IP address of the default gateway.
:

A3 Finding the IP address that corresponds to a MAC address
:

A4 Finding the MAC address that corresponds to an IP
: address – (Correct Alternative)

		Objective Question		
84	84	Which of the following statements are TRUE	1.0	0.25

(S1) TCP handles both congestion and flow control

(S2) UDP handles congestion but not flow control

(S3) Fast retransmit deals with congestion but not flow control

(S4) Slow start mechanism deals with both congestion and flow control

A1 S1, S2 and S3 only
:

A2 S1 and S3 only
:

A3 S1, S3 and S4 only – (Correct Alternative)

		:		
		A4 : S3 and S4 only		

Objective Question

85	85	How many 32K * 1 RAM chips are needed to provide a memory capacity of 256 K-bytes? A1 : 8 A2 : 32 **A3 : 64 – (Correct Alternative)** A4 : 128	1. 0	0.2 5

Objective Question

86	86	A CPU has an arithmetic unit that adds bytes and then sets its V, C, and Z flag bits as follows. The V-bit is set if arithmetic overflow occurs (in twos complement arithmetic). The C-bit is set if a carry-out is generated from the most significant bit during an operation. The Z-bit is set if the result is zero. What are the values of the V, C, and Z flag bits, respectively after the 8-bit bytes 11001100 and 10001111 are added: A1 : 0 0 0 **A2 : 1 1 0 – (Correct Alternative)** A3 : 1 1 1	1. 0	0.2 5

		A4: 0 0 1		

Objective Question

87	87	In a pipelined RISC computer where all arithmetic instructions have the same CPI (cycles per instruction), which of the following actions would improve the execution time of a typical program:	1.0	0.25

I. Increasing the clock cycle rate.

II. Disallowing any forwarding in the pipeline.

III. Doubling the sizes of the instruction cache and the data cache without changing the clock cycle time.

A1: I only

A2: II only

A3: I and II only

A4: I and III – (Correct Alternative)

Objective Question

88	88	Which of the following is used in digital circuits to control signal and data routing	1.0	0.25

A1: Multiplexers – (Correct Alternative)

A2: Program counters

A3: Flip-flops

A4 Gates

		:		

Objective Question

89	89	In the absolute addressing mode	1.0	0.25
		A1 : the operand is inside the instruction.		
		A2 the address of the operand is inside the instruction. – **: (Correct Alternative)**		
		A3 the register containing the address of the operand is specified : inside the instruction		
		A4 : the location of the operand is implicit.		

Objective Question

90	90	A queue is implemented using an array such that ENQUEUE and DEQUEUE operations are performed efficiently. Which one of the following statements is CORRECT (n refers to the number of items in the queue)?	1.0	0.25
		A1 Both operations can be performed in constant time – **: (Correct Alternative)**		
		A2 At most one operation can be performed in constant time but : the worst case time for the other operation will be at least n		
		A3 The worst case time complexity for both operations will be at : least n		
		A4 Worst case time complexity for both operations will be at least : log2n		

Objective Question

91	91	Which of the following pairs have DIFFERENT expressive power?	1.0	0.25

A1 Deterministic finite automata(DFA) and Non-deterministic
: finite automata(NFA)

A2 Deterministic push down automata(DPDA) and Non-
: deterministic push down – (Correct Alternative)

A3 Deterministic single-tape Turing machine and Non-
: deterministic single-tape Turing machine

A4
: Single-tape Turing machine and multi-tape Turing machine

Objective Question

| 92 | 92 | In a heap with n elements with the smallest element at the root, the seventh smallest element can be found in time | 1.0 | 0.25 |

A1
: **(n log n) – (Correct Alternative)**

A2
: automata(NPDA)

A3
: (log n)

A4
: (1)

Objective Question

| 93 | 93 | Suppose a circular queue of capacity (n-1) elements is implemented with an array of n elements. Assume that the insertion and deletion operations are carried out using REAR and FRONT as array index variables, respectively. Initially REAR=FRONT=0. The conditions to detect queue full and queue empty are? | 1.0 | 0.25 |

A1 Full: (REAR+1)mod n = = FRONT Empty: REAR= =FRONT
: – (Correct Alternative)

		A2 :	Full: (REAR+1)mod n = = FRONT Empty: (FRONT+1) mod n = = REAR		
		A3 :	Full: REAR= =FRONT Empty: (REAR+1) mod n= =FRONT		
		A4 :	Full: (FRONT+1)mod n= =REAR Empty: REAR= =FRONT		

Objective Question

| 94 | 94 | A deck of 5 cards (each carrying a distinct number from 1 to 5) is shuffled thoroughly. Two cards are then removed one at time from the deck. What is the probability that the two cards are selected with the number on the first card being one higher than the number on the second card? | 1.0 | 0.25 |

A1 : **1⁄5 – (Correct Alternative)**

A2 : 4⁄25

A3 : 1⁄4

A4 : 2⁄5

Objective Question

| 95 | 95 | Given Set A = {2; 3; 4; 5} and Set B = {11; 12; 13; 14; 15} two numbers are randomly selected, one from each set. What is the probability that the sum of the two numbers equals 16? | 1.0 | 0.25 |

A1 : **0:20 – (Correct Alternative)**

A2 : 0:30

| | | A3 : | 0:25 | | |
| | | A4 : | 0:33 | | |

Objective Question

96	96	Which language class has the following properties? It is closed under union and intersection but not complement.	1.0	0.25
		A1 : Regular language		
		A2 : Context-free languages		
		A3 : Recursive languages		
		A4 Recursively enumerable languages – (Correct : Alternative)		

Objective Question

97	97	Let P, Q and R be tree atomic prepositional assertions. Let X denotes (P VQ) ➔R and Y denotes (P ➔ R) V (Q ➔ R). Which one of the following is a tautology?	1.0	0.25
		A1 : X ⬅➔Y		
		A2 : X➔ Y – (Correct Alternative)		
		A3 : Y ➔ X		
		A4 : not Y➔X		

			Objective Question		

Objective Question

98	98	Two events, A and B, are mutually exclusive and each have a nonzero probability. If event A is known to occur, the probability of the ccurrence of event B is:	1.0	0.25

A1 : one

A2 : any positive value

A3 : zero – (Correct Alternative)

A4 : any value between 0 to 1

Objective Question

99	99	What does the following declaration mean? int (*ptr)[10];	1.0	0.25

A1 : ptr is array of pointers to 10 integers

A2 : ptr is a pointer to an array of 10 integers – (Correct Alternative)

A3 : ptr is an array of 10 integers

A4 : ptr is an pointer to array

Objective Question

100	100		1.0	0.25

Let G=(V, E) be any connected undirected edge-weighted graph. The weights of the edges in E are positive and distinct. Consider the following statements:

i) Minimum spanning tree of G is always unique
j) Shortest path between any two vertices of G is always unique

Which of the above statements is/are necessarily true?

A1 : i only

A2 : j only – (Correct Alternative)

A3 : both i and j

A4 : neither i nor j

Objective Question				
101	101	Which of the following is true about Linux? A1 : It is developed by AT&T. A2 : It is developed by Microsoft **A3 : It is open source software – (Correct Alternative)** A4 : It is closed source software	1.0	0.25

Objective Question				
102	102	A compiler translates a program written in a high-level language into **A1 Machine language – (Correct Alternative)**	1.0	0.25

		:		
		A2: An algorithm		
		A3: A debugged program		
		A4: Natural language		

Objective Question

103	103	What does the computer's operating system do?	1.0	0.25
		A1: Communicates with peripherals		
		A2: Coordinates concurrent processing of jobs		
		A3: Monitors resources and handles basic security		
		A4: All of the above – (Correct Alternative)		

Objective Question

104	104	If a user needs information instantly available to the CPU, it should be stored:	1.0	0.25
		A1: In the CPU		
		A2: In RAM – (Correct Alternative)		
		A3: In secondary storage		

		A4: On a CD		

Objective Question

105	105	A physical connection between the microprocessor memory and other parts of the microcomputer is known as	1.0	0.25
		A1: Path		
		A2: Address bus – (Correct Alternative)		
		A3: Route		
		A4: All of the above		

Objective Question

106	106	Programs such as Internet Explorer that serve as navigable windows into the Web are called	1.0	0.25
		A1: Networks		
		A2: Internet		
		A3: Web browsers – (Correct Alternative)		
		A4: None of these		

Objective Question

10	107	Which image file format can be animated?	1.	0.2

7			0	5
		A1 : **GIF – (Correct Alternative)**		
		A2 : JPEG		
		A3 : CDR		
		A4 : TIFF		

Objective Question

10 8	108	The Satellite based Tracking system that enables the determination of person's position is ____?	1. 0	0.2 5
		A1 : WAP		
		A2 : SMS		
		A3 : **GPS – (Correct Alternative)**		
		A4 : JPG		

Objective Question

10 9	109	Which of these not a markup language?	1. 0	0.2 5
		A1 : HTML		
		A2 : XML		

		A3 : SGML		
		A4 : **XGML – (Correct Alternative)**		

Objective Question

110	110	Which protocol is used to send electronic mail? A1 : Outlook Express A2 : POP3 A3 : FTP A4 : **SMTP – (Correct Alternative)**	1.0	0.25

Objective Question

111	111	Digital signatures are? **A1 : Used for authenticating digital documents – (Correct Alternative)** A2 : Used for encrypting digital documents A3 : Used for encrypting and authenticating digital documents A4 : All of above	1.0	0.25

Objective Question

11	112	The following device is used to connect two systems using	1.	0.2

2		different Protocols?	0	5
		A1: Modem		
		A2: Repeater		
		A3: Gateway – (Correct Alternative)		
		A4: Bridge		

Objective Question

113	113	What is the term used for describing the judgmental or commonsense part of problem-solving?	1.0	0.25
		A1: Heuristic – (Correct Alternative)		
		A2: Value based		
		A3: Critical		
		A4: Analytical		

Objective Question

114	114	The number of bits that make one nibble is	1.0	0.25
		A1: 8		
		A2: 16		

A3
: **4 – (Correct Alternative)**

A4
: None of above

Objective Question

115	115	1 GB is equal to	1.0	0.25

A1
: **1024 MB – (Correct Alternative)**

A2
: 1024 KB

A3
: 1024 bits

A4
: None of above

Objective Question

116	116	The 2's compliment of binary number 10101 is	1.0	0.25

A1
: 110

A2
: 11010

A3
: **1011 – (Correct Alternative)**

A4
: 11100

Objective Question

117	117	Which is an incorrect combination?	1.0	0.25
		A1: 1 Byte = 8 bits		
		A2: 1 KB = 1000 Bytes		
		A3: 1 nibble = 4 bits		
		A4: 1 MB = 2^{20} Bytes – (Correct Alternative)		
Objective Question				
118	118	The register in CPU is defined as	1.0	0.25
		A1: group of bits		
		A2: group of Bytes		
		A3: group of flip-flop – (Correct Alternative)		
		A4: group of word		
Objective Question				
119	119	The cache memory in computer organization is placed	1.0	0.25
		A1: on main memory		
		A2: in CPU		

		A3: **between CPU and main memory – (Correct Alternative)**		
		A4: associated with hard disk		

Objective Question

120	120	Which is not an Object Oriented Language	1.0	0.25
		A1: C++		
		A2: Java		
		A3: **C – (Correct Alternative)**		
		A4: VC++		